Reply to Office Action Dated August 19, 2009

Amendments to the Specification:

Please amend par. [0001] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

This invention relates generally to impregnation processes for impregnating wood or wood products to improve the decay resistance, dimensional stability and/or UV resistance of the wood and densify the wood and in particular but not exclusively to an acetylation impregnation process.

Please amend par. [0018] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

The present invention provides the process of independent claim 1. The dependent claims specify preferred but optional features. In another aspect the The invention provides a process for impregnating wood or wood based material comprising the steps of:

Please amend par. [0024] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

In another aspect the present invention provides a process wherein thea solvent is selected from any one or more of water, isopropanol, methylene chloride, xylene[[,]] and xylene mixed with paraffin wax, and acetic anhydride.

Please amend par. [0027] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

b. applying a <u>pre-pressure pre-pressure</u> to a wood or wood based material prior to contact with the working solution at the super hot temperature, sufficient to maintain the working solution in the liquid phase;

Please amend par. [0032] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

The term 'comprising' as used in this specification and claims means 'consisting at least in part of', that is to say when <u>interrupting interpreting</u> independent claims including that term, the features prefaced by that term in each claim will need to be present but other features can also be present.

Please amend par. [0041] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

Any additional working solution and/or waste material is preferably subsequently separated from the wood or wood based material to protect the working solution from contamination by wood extractives and reaction by-product.

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Please amend par. [0045] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

The composition of the working solution will depend upon the desired effect of the impregnation. Typically, the impregnation process will aim to improve dimensional instability caused by the hygroscopic nature of the wood, discoloration, biological degradation and/or degradation by exposure to UV light. Examples of suitable working solutions include copper naphthenate in a solvent or solvents above their boiling point such as xylene, isopropanol and methylene chloride. Alternatively, xylene may be used as a heating medium by itself or in combination with paraffin wax. Since high temperature is involved in the process acetic anhydride may also be used to dissolve additional anhydrides, e.g. succinic anhydride. Preferably the working solution is acetic anhydride.

Please amend par. [0056] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

By draining the working solution after contact with the wood while maintaining a working pressure the extractives and by-product (for example acetic acid) contamination are reduced. Once the working solution has been drained from the second vessel, a vacuum may be drawn through a condenser in a second vessel to facilitate the removal of further unreacted working solution from within the wood or wood based product together with any reaction by-products formed. Where the working solution comprises acetic anhydride, pressure kickback contains a mixture of acetic anhydride acetic acid and wood extractives and is coloured, typically

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red or brown, and vacuum kickback is colourless due to vaporisation condensation of acetic acid rather than liquid flow. This is mainly due to the initial high temperature of the working solution which facilitates the removal[[s]] of corrosive unwanted acetic acid.

Please amend par. [0057] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

Extracted reaction by-products may optionally be separated, purified and recycled by methods known in the art. For example, where acetic anhydride is the working solution acetic acid is the by-product Acetic acid is the by-product of acetic anhydride in the working solution.

The acetic acid is extracted as a gas and may be collected by condensation. By dehydrating the acetic acid, acetic anhydride is formed suitable for reuse in the impregnation process. By separating only vacuum kickback some contamination of the working solution by pressure kickback occurs which can be tolerated by adding more acetic anhydride to the working solution.

Please amend par. [0064] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

The process can also be used for other preservatives, solvents or combination of the two.

For example copper naphthenate can be dissolved in any solvent and pre-heated to above the boiling point of solvent. After flooding and pressurizing using the super hot solvent (above boiling point) the recovery of the solvent is greatly facilitated.

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Please amend par. [0067] of the specification corresponding to publication (US 2007/0128422 A1) as follows:

All wood samples were oven dried prior to treatments except treatments 6, 7 and 19[[20]].

After par. [0077] of the specification corresponding to publication (US 2007/0128422 A1), please amend the header beginning with "Experiment 2" as follows:

Experiment 2: Alternative Solvents with Preservative Agent and not forming part of the present invention